

# Facsimile

# Arent Fox

Date: January 3, 2008

Pages (including cover): 9

Attorney: 1549  
Client-Matter: 108421-00126

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## PLEASE DELIVER TO:


Name/Company	Fax	Verify
Ms. Magdalen Greenlief	571-273-0125	
Office of the Commissioner for Patents		

## MESSAGE/INSTRUCTIONS

Re: Request for Participation in the Patent Prosecution Highway (PPH) Pilot Program  
U.S. Patent Application Number: 10/567,341  
Inventor: Yuichi MATSUO et al.  
Filed: February 6, 2006  
Attorney Docket Number: 108421-00126  
For: PURIFICATION CATALYST FOR EXHAUST GAS, PRODUCTION METHOD  
THEREFOR, AND PURIFICATION CATALYST EQUIPMENT FOR EXHAUST GAS

## CERTIFICATE OF TRANSMISSION

I hereby certify that these documents are being transmitted by facsimile to Ms. Magdalen Greenlief of the Office of the Commissioner for Patents, facsimile number 571-273-0125, on January 3, 2008.

  
George E. Oram, Jr.  
Registration Number 27,931

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TECH/563043.1

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**REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM  
BETWEEN THE (1) JPO OR (2) UKIPO, AND THE USPTO**

Application No.:	10/567,341	First Named Inventor:	Yuichi MATSUO et al.
Filing Date:	February 6, 2006	Attorney Docket No.:	108421-00126
Title of the Invention:	PURIFICATION CATALYST FOR EXHAUST GAS, PRODUCTION METHOD THEREFOR, AND PURIFICATION CATALYST EQUIPMENT FOR EXHAUST GAS		

**THIS REQUEST FOR PARTICIPATION IN THE PPH PILOT PROGRAM MUST BE FAXED TO:  
THE OFFICE OF THE COMMISSIONER FOR PATENTS AT 571-273-0125 DIRECTED TO THE ATTENTION OF MAGDALEN GREENLIEF**

**APPLICANT HEREBY REQUESTS PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM AND PETITIONS TO MAKE THE ABOVE-IDENTIFIED APPLICATION SPECIAL UNDER THE PPH PILOT PROGRAM.**

The above-identified application validly claims priority under 35 U.S.C. 119(a) and 37 CFR 1.55 to one or more corresponding JPO application(s) or UKIPO application(s).

The ☒ JPO ☐ UKIPO application number(s) is/are: 2004-002667, now Japanese Patent No. 3843102

The filing date of the ☒ JPO ☐ UKIPO application(s) is/are: January 8, 2004

**I. List of Required Documents:**

- a. A copy of all JPO office actions (excluding "Decision to Grant a Patent") in the above-identified JPO application(s), or a copy of all UKIPO office actions in the above-identified UKIPO application(s).

☐ Is attached.

☒ Is available via Dossier Access System. Applicant hereby requests that the USPTO obtain these documents via the Dossier Access System.

\*It is not necessary to submit a copy of the "Decision to Grant a Patent" and an English translation thereof.

- b. A copy of all claims which were determined to be patentable by the JPO in the above-identified JPO application(s), or a copy of all claims which were determined to be patentable by the UKIPO in the above-identified UKIPO application(s).

☐ Is attached.

☒ Is available via Dossier Access System. Applicant hereby requests that the USPTO obtain these documents via the Dossier Access System.

- c. English translations (where applicable) of the documents in a. and b. above along with a statement that the English translations are accurate are attached.

Information disclosure statement listing the documents cited in the JPO office actions or UKIPO office actions was filed August 7, 2006.

Copies of all documents are attached except for U.S. patents or U.S. patent application publications.

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This collection of information is required by 35 U.S.C. 119, 37 CFR 1.55, and 37 CFR 1.102(d). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. FAX COMPLETED FORMS TO: Office of the Commissioner for Patents at 571-273-0125, Attention: Magdalen Greenleaf.

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**REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM  
BETWEEN THE (1) JPO OR (2) UKIPO, AND THE USPTO**

(continued)

Application No.:	10/567,341	First Named Inventor:	Yuichi MATSUO et al.
<b>II. Claims Correspondence Table:</b>			
Claims in US Application	Patentable Claims in JP/UKIPO Application	Explanation regarding the correspondence	
12. The purification catalyst for exhaust gas according to claim 11, wherein the aluminum oxide is trigonal or rhombohedral.	1. A purification catalyst for exhaust gas, comprising an Al oxide supporting Pd and aluminum oxide, wherein the Al oxide is (Ln: rare-earth metal) generated as a single phase and trigonal or rhombohedral.		
	2. The purification catalyst for exhaust gas according to claim 1, wherein the purification catalyst is a powder having a surface-to-weight ratio of 8 m <sup>2</sup> or more.		
11. A purification catalyst for exhaust gas, comprising an LnAlO <sub>3</sub> (Ln: rare-earth metal) supporting Pd, wherein the catalyst is produced by adding at least one kind of compound selected from the group of compounds of carboxylic acid having a hydroxyl group or a mercapto group and having a carbon number of 2 to 20, dicarboxylic acid having a carbon number of 2 or 3, and monocarboxylic acid having a carbon number of 1 to 20 to aqueous nitrate solution including a component.	3. The purification catalyst for exhaust gas according to claim 1 or 2, wherein the catalyst is produced by adding at least one kind of compound selected from the group of compounds of carboxylic acid having a hydroxyl group or a mercapto group and having a carbon number of 2 to 20, dicarboxylic acid having a carbon number of 2 or 3, and monocarboxylic acid having a carbon number of 1 to 20 to aqueous nitrate solution including Ln and Al.		
13. The purification catalyst for exhaust gas according to claim 12, wherein the catalyst is produced by evaporating the aqueous nitrate solution completely, to produce a carboxylic acid complex polymer and heating the carboxylic acid complex polymer.	4. The purification catalyst for exhaust gas according to claim 3, wherein the catalyst is produced by evaporating the aqueous nitrate solution completely, to produce a carboxylic acid complex polymer and heating the carboxylic acid complex polymer.		
	5. The purification catalyst for exhaust gas according to claim 4, wherein the carboxylic acid is malic acid.		
14. The purification catalyst for exhaust gas according to claim 12, wherein Pd is supported on LnAlO <sub>3</sub> in which Ln is a rare-earth metal, and an oxidation state of Pd in a surface supporting Pd is a state of Pd <sup>2+</sup> .	6. The purification catalyst for exhaust gas according to one of claims 2 to 5, wherein Pd is supported on LnAlO <sub>3</sub> (Ln: rare-earth metal), and an oxidation state of Pd in a surface supporting Pd is a state of Pd <sup>2+</sup> .		

**REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM  
BETWEEN THE (1) JPO OR (2) UKIPO, AND THE USPTO**  
(continued)

Application No.: 10/567,341 First Named Inventor: Yuichi MATSUO et al.

**II. Claims Correspondence Table (continued):**

Claims in US Application	Patentable Claims in JP/UKIPO Application	Explanation regarding the correspondence
6. A production method for a purification catalyst for exhaust gas, the method comprising: preparing at least one kind of compound selected from a group of compounds of carboxylic acid having a hydroxyl group or a mercapto group and having a carbon number of 2 to 20, dicarboxylic acid having a carbon number of 2 or 3, and monocarboxylic acid having a carbon number of 1 to 20; and adding at least one compound selected from the group to an aqueous nitrate solution including a component.	7. A production method for a purification catalyst for exhaust gas, wherein Pd and PdO are supported on an Al oxide and the Al oxide is (Ln: rare-earth metal) generated as a single phase and trigonal or rhombohedral, the method comprising: preparing at least one kind of compound selected from a group of compounds of carboxylic acid having a hydroxyl group or a mercapto group and having a carbon number of 2 to 20, dicarboxylic acid having a carbon number of 2 or 3, and monocarboxylic acid having a carbon number of 1 to 20; and adding at least one compound selected from the group to an aqueous nitrate solution including Ln and Al component.	
7. The production method for a purification catalyst for exhaust gas according to claim 6, the method comprising: evaporating aqueous carboxylic acid completely to produce a carboxylic acid complex polymer; and heating the carboxylic acid complex polymer.	8. The production method for a purification catalyst for exhaust gas according to claim 7, wherein the method comprising: evaporating the aqueous nitrate solution completely to produce a carboxylic acid complex polymer; and heating the carboxylic acid complex polymer.	
8. The production method for a purification catalyst for exhaust gas according to claim 7, wherein a heating temperature in the heating of the carboxylic acid complex polymer is not more than 1000°C.	9. The production method for a purification catalyst for exhaust gas according to claim 8, wherein a heating temperature in the heating of the carboxylic acid complex polymer is not more than 1000°C.	
	10. A Purification catalyst equipment for exhaust gas, comprising the purification catalyst for exhaust gas according to one of claims 1 to 5.	
10. A purification catalyst for exhaust gas, comprising an aluminum oxide supporting Pd, wherein the aluminum oxide is PrAlO <sub>3</sub> or NdAlO <sub>3</sub> .		

PTO/SB/20 (09-07)

Approved for use through 12/31/2008. OMB 0851-0058  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

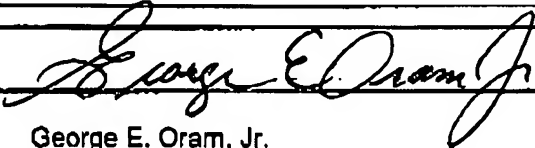
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**REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM  
BETWEEN THE (1) JPO OR (2) UKIPO, AND THE USPTO**  
(continued)

Application No.:	10/567,341	First Named Inventor:	Yuichi MATSUO et al.
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III. All the claims in the US application sufficiently correspond to the patentable/allowable claims in the JPO or UKIPO application.

**IV. Payment of Fees:**The Commissioner is hereby authorized to charge the petition fee under 37 CFR 1.17(h) as required by 37 CFR 1.102(d) to ☒ Deposit Account No. 01-2300☐ Credit Card. Credit Card Payment Form (PTO-2038) is attached.

Signature		Date	January 3, 2008
Name (Print/Typed)	George E. Oram, Jr.	Registration Number	27,931

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## PATENT CLAIMS

1. A purification catalyst for exhaust gas, comprising an Al oxide supporting Pd and PdO, wherein the Al oxide is  $\text{LnAlO}_3$  (Ln: rare-earth metal) generated as a single phase and trigonal or rhombohedral.
2. The purification catalyst for exhaust gas according to claim 1, wherein the purification catalyst is a powder having a surface-to-weight ratio of  $8 \text{ m}^2$  or more.
3. The purification catalyst for exhaust gas according to claim 1 or 2, wherein the catalyst is produced by adding at least one kind of compound selected from the group of compounds of carboxylic acid having a hydroxyl group or a mercapto group and having a carbon number of 2 to 20, dicarboxylic acid having a carbon number of 2 or 3, and monocarboxylic acid having a carbon number of 1 to 20 to aqueous nitrate solution including Ln and Al.
4. The purification catalyst for exhaust gas according to claim 3, wherein the catalyst is produced by evaporating the aqueous nitrate solution completely, to produce a carboxylic acid complex polymer and heating the carboxylic acid complex polymer.
5. The purification catalyst for exhaust gas according to claim 4, wherein the carboxylic acid is malic acid.

6. The purification catalyst for exhaust gas according to one of claims 2 to 5, wherein Pd is supported on  $\text{LnAlO}_3$  (Ln: rare-earth metal), and an oxidation state of Pd in a surface supporting Pd is a state of  $\text{Pd}^{2+}$ .

7. A production method for a purification catalyst for exhaust gas, wherein Pd and PdO are supported on an Al oxide and the Al oxide is (Ln: rare-earth metal) generated as a single phase and trigonal or rhombohedral, the method comprising:

preparing at least one kind of compound selected from a group of compounds of carboxylic acid having a hydroxyl group or a mercapto group and having a carbon number of 2 to 20, dicarboxylic acid having a carbon number of 2 or 3, and monocarboxylic acid having a carbon number of 1 to 20; and

adding at least one compound selected from the group to an aqueous nitrate solution including Ln and Al component.

8. The production method for a purification catalyst for exhaust gas according to claim 7, wherein the method comprising:

evaporating the aqueous nitrate solution completely to produce a carboxylic acid complex polymer; and

heating the carboxylic acid complex polymer.

9. The production method for a purification catalyst for exhaust gas according to claim 8, wherein a heating temperature in the heating of the carboxylic acid complex polymer is not more than  $1000^\circ\text{C}$ .

10. A Purification catalyst equipment for exhaust gas,  
comprising the purification catalyst for exhaust gas according to  
one of claims 1 to 5.

I, Mikio Suenari, being familiar with the Japanese and English languages, hereby declare that I am the translator of the documents attached and certify that to the best of my knowledge and believe the following is a true and accurate translation of Japanese Patent No. 3843102.

Signed

  
Mikio Suenari

Date

December 29, 2007

**Disclaimer:**

This English translation is produced by machine translation and may contain errors. The JPO, the INPIT, and those who drafted this document in the original language are not responsible for the result of the translation.

**Notes:**

1. Untranslatable words are replaced with asterisks (\*\*\*\*).
2. Texts in the figures are not translated and shown as it is.

Translated: 01:18:33 JST 01/09/2008

Dictionary: Last updated 12/14/2007 / Priority:

## Decision to Grant a Patent

Application number: Application for patent 2004-002667

Date of Drafting: Heisei 18(2006) July 26

Patent examiner: EBIHARA, Eiko 3343 4G00

Title of invention: An emission-gas-purification catalyst, its manufacture method, and emission-gas-purification catalyst equipment

The number of claims: 10

Applicant: HONDA MOTOR CO. LTD.

Representative: SUENARI, Mikio

This application is to be granted a patent as there is no reason for refusal.

Director General(p.p.) Director(p.p.) Examiner Assistant examiner Manager for Determination  
of Classification GOTO, Masahiro EBIHARA, Eiko MUTA, Hirokazu EBIHARA, Eiko 8926 9342  
3343 9342

1. Distinction of Patent: Usually

2. Reference documents: \*\*

3. Application of Patent Law, Section 30: Nothing

4. Change of Title of Invention: Nothing

5. International Patent Classification (IPC)

B01J 23/56 301A B01J 32/00 B01J 23/10 A B01J 35/10 301J, B01J 37/08 , B01D 53/36 104A,  
B01D 53/36 102B, F01N 3/10 ZABA

6. Deposition of Microorganism

7. Display of Purport that Retroactivity of Filing Date is not Accepted

Decision to Grant a Patent(Memorandum)

Application number: Application for patent 2004-002667

1. Technical Fields to Be Searched (IPC, DB Name)

B01J 21 / 00 - 38/74 B01D 53/86 and 94 REGISTRY(STN) CAplus (STN)

2. Reference patent documents

JP,03-068451,A (JP, A) JP,01-168343,A (JP, A) JP,03-052642,A (JP, A) JP,05-285387,A (JP, A) JP,63-013729,B (JP, B1) JP,05-086259,B (JP, B-2) JP,2003-175337,A (JP, A)

3. Reference books and magazines

Jon Hangan and Observation of aluminate whiskers and nanotubes in dynamometer-aged three way automotive catalysts, Catalysis Letters, 2003 April 15, Vol.86, No.4, p.267-272

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[Translation done.]